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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/560,080

12/08/2005

Shigeru Unami

05850/HG

1084

1933 7590 08/17/2007
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EXAMINER

MAI, NGOCLAN THI

ART UNIT

PAPER NUMBER

1742

MAIL DATE

DELIVERY MODE

08/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/560,080	Applicant(s) UNAMI ET AL.	
	Examiner Ngoclan T. Mai	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/8/05, 3/9/06, 7/10/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Preliminary amendment filed 12/8/05 has been entered. Currently claims 1-4 are pending, wherein claim 3 is amended and claim 4 is new.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 -4 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 63 137102.

Regarding to claims 1 and 3, JP '102 discloses a mixed powder for powder metallurgy comprising an alloy steel powder having: an iron-based powder containing Mn of 0.3% by mass or less and Mo of 0.25 to 1.0% by mass as prealloyed elements; and powders of Mo of $\leq 1.0\%$ by mass and Cu of 1-3% by mass blended with said iron-based powder or adhered to the surfaces of said iron-based powder in the form of a powder by diffusion bonding or by employing a binding agent. See page 7, lines 12-20 and page 9, lines 17-21. JP '102 also teaches Ni powder in the amount of 1-4% by weight can be also be added to the iron-based powder. See Table II and Example 2.

The difference between JP '102 and the claims is that JP '102 does not specifically teach Mo powder adhered to the surface of the iron-based powder by diffusion bonding and the at least one of Ni and Cu powder is adhered to the surface of the iron-based powder using a binder.

However since JP '102 teaches adhering can be done by simply mixing, diffusion bonding or using binding agent, it would have been obvious to one skilled in the art to form the mixed powder of the reference by combining the techniques as taught to adhere alloying components to the surface of the iron-based powder. It also be obvious to adhere one alloying component to the surface of the iron-based powder by diffusion bonding and the other alloying component by employing binding agent because these techniques are suitable for adhering alloying component to the base powder as taught by the reference and the combination would have yielded predictable results to one of ordinary skilled in the art at the time of the invention.

As for claims 2 and 4, while JP '102 does not specify the amount of Mo in the surface of the alloy steel powder as recited in claim 2. However, given that the prior art mixed powder comprises the iron-based powder containing the claimed amount of Mn and Mo and powders of Mo, Ni and/or Cu adhered to the surface of the iron-based powder, wherein each is present in the amount within the claimed ranges, it is a reasonable assumption that the surface area of the alloy steel powder having Mo would likewise be the same in either the prior art or the claimed invention. Thus, a prima-facie case of obviousness is established between the disclosures of JP '102 and the presently claimed invention.

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoclan T. Mai whose telephone number is (571) 272-1246. The examiner can normally be reached on 9:30-6:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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